IN THE CLAIMS:

Please enter the following amended claims as follows:

1. (currently amended) A computer system programmed to process a large data set includes means for ~~analysing~~ <u>analyzing</u> the data set and means for applying a data compression technique to the ~~analysed~~ <u>analyzed</u> data set such that the compressed ~~analysed~~ <u>analyzed</u> data set has high fidelity in regions of interest and has lower fidelity in regions of lesser interest <u>wherein the computer system also comprises means to select a variable from the data set such that a high rate of change of the variable indicates the regions of interest and a low rate of change of the variable indicates the regions of lesser interest</u>.

2. (original) A computer system as claimed in claim 1 wherein the data compression technique comprises the use of a wavelet compression technique.

3. (original) A computer system as claimed in claim 1 wherein the data compression technique produces high fidelity in geometric regions of interest at points in time of interest.

4. (original) A computer system as claimed in claim 3 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

5. (currently amended) A computer system as claimed in claim 1 wherein the ~~analysed~~ <u>analyzed</u> data set comprises a 4D data set.

6. (currently amended) A computer system as claimed in claim 1 wherein the ~~analysed~~ <u>analyzed</u> data set comprises an ~~analysed~~ <u>analyzed</u> data set of a fan blade containment analysis of a casing <u>when a fan blade impacts a foreign object during use</u>.

7. (currently amended) A computer system as claimed in claim 1 wherein the means for ~~analysing~~ <u>analyzing</u> the data set comprises a means for finite element analysis.

8. (original) A computer system as claimed in claim 1 wherein the computer system comprises a local workstation and a graphical display is produced at the local workstation.

9. (currently amended) A method for processing a large data set comprising ~~analysing~~ analyzing the data set and applying a data compression technique to the ~~analysed~~ analyzed data set such that the compressed ~~analysed~~ analyzed data set has high fidelity in regions of interest and has lower fidelity in regions of lesser interest wherein the computer system also comprises means to select a variable from the data set such that a high rate of change of the variable indicates the regions of interest and a low rate of change of the variable indicates the regions of lesser interest.

10. (original) A method as claimed in claim 9 wherein the data compression technique comprises using a wavelet compression technique.

11. (original) A method as claimed in claim 9 wherein the data compression technique produces high fidelity in geometric regions of interest at points in time of interest.

12. (original) A method as claimed in claim 11 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

13. (currently amended) A method as claimed in claim 9 wherein the ~~analysed~~ analyzed data set comprises a 4D data set.

14. (currently amended) A method as claimed in claim 9 wherein the ~~analysed~~ analyzed data set comprises an ~~analysed~~ analyzed data set of a fan blade containment analysis of a casing when a fan blade impacts a foreign object during use.

15. (currently amended) A method as claimed in claim 9 wherein the ~~analysing~~ analyzing of the data set comprises finite element analysis.

16. (original) A method as claimed in claim 9 comprising producing a graphical display at a local workstation.

17. (currently amended) A computer system programmed to process a large data set includes means for applying a data compression technique to the data set and means for ~~analysing~~ analyzing the compressed data set such that the analysis has high fidelity in regions of interest and has lower fidelity in regions of lesser interest.

18. (original) A computer system as claimed in claim 17 wherein the data compression technique comprises the use of a wavelet compression technique.

19. (original) A computer system as claimed in claim 17 wherein the data compression technique allows the analysis to take place in high fidelity in geometric regions of interest at points of time of interest.

20. (original) A computer system as claimed in claim 17 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

21. (original) A computer system as claimed in claim 17 wherein the data set comprises a 4D data set.

22. (currently amended) A computer system as claimed in claim 17 wherein the data set comprises a data set of a fan blade containment analysis of a casing when a fan blade impacts a foreign object during use.

23. (currently amended) A computer system as claimed in claim 17 wherein the means for analysing analyzing the compressed data set comprises a means for finite element analysis.

24. (original) A computer system as claimed in claim 17 wherein the computer system comprises a local workstation and a graphical display is produced at the local workstation.

25. (currently amended) A method for processing large data sets comprising applying a data compression technique to the data set and analysing analyzing the compressed data set such that the analysis has high fidelity in regions of interest and has lower fidelity in regions of lesser interest.

26. (original) A method as claimed in claim 25 wherein the data compression technique comprises using a wavelet compression technique.

27. (original) A method as claimed in claim 25 wherein the data compression technique allows the analysis to take place in high fidelity in geometric regions of interest at points in time of interest.

28. (original) A method as claimed in claim 25 wherein the geometric region has a rapid change in the stress field or has a high deformation rate.

29. (original) A method as claimed in claim 25 comprising producing a graphical display at a local workstation.

30. (original) A method as claimed in claim 25 wherein the data set comprises a 4D data set.

31. (currently amended) A method as claimed in claim 25 wherein the data set comprises a data set of a fan blade containment analysis of a casing when a fan blade impacts a foreign object during use.

32. (currently amended) A method as claimed in claim 25 wherein the ~~analysing~~ analyzing of the compressed data set comprises finite element analysis.

33. (new) A computer system programmed to process a large data set includes means for analyzing the data set, the means for analyzing the data set comprises means for solving mathematical expressions to produce an analyzed data set comprising a set of points within a problem domain, and means for applying a data compression technique to the analyzed data set such that the compressed analyzed data set has high fidelity in regions of interest and has lower fidelity in regions of lesser interest, the data compression technique produces high fidelity in geometric regions of interest at points in time of interest, the geometric region has a stress field and a deformation rate and the geometric region has at least one of a rapid change in the stress field, a high stress field or a high deformation rate, the computer system comprises a local workstation and a graphical display, and the computer has means to automatically present the most significant cross-sectional views of the graphical display, the means to automatically present the most significant cross-sectional views selects regions which have at least one of a stress, a deformation rate or other variable above a threshold.

34. (new) A method for processing a large data set comprising analyzing the data set, the analyzing of the data set comprising solving mathematical expressions to produce an analyzed data set comprising a set of points within a problem domain, and applying a data compression technique to the analyzed data set such that the compressed analyzed data set has high fidelity in regions of interest and has lower fidelity in regions of lesser interest, the data compression technique produces high fidelity in geometric regions of interest at points in time of interest, the geometric region has a stress field and a deformation rate and the geometric region has at least one of a rapid change in the stress field, a high

stress field or a high deformation rate, producing a graphical display at a local workstation, and automatically presenting the most significant cross-sectional views on the graphical display, the automatic presentation of the most significant cross-sectional views comprising selecting regions which have at least one of a stress, a deformation rate or other variable above a threshold.

35. (new) A computer system programmed to process a large data set includes means for applying a data compression technique to the data set and means for analyzing the data set such that the analysis has high fidelity regions of interest and has lower fidelity in regions of lesser interest, the data compression technique allows the analysis to take place in high fidelity in geometric regions of interest at points in time of interest, the geometric region has a stress field and a deformation rate and the geometric region has at least one of a rapid change in the stress field, a high stress field or a high deformation rate, the computer system comprises a local workstation and a graphical display, and the computer has means to automatically present the most significant cross-sectional views on the graphical display, the means to automatically present the most significant cross-sectional views selects regions which have at least one of a stress, a deformation rate or other variable above a threshold.

36. (new) A method for processing a large data set comprising applying a data compression technique to the data set and analyzing the compressed data set such that the analysis has high fidelity in regions of interest and has lower fidelity in regions of lesser interest, the data compression technique allows the analysis to take place in high fidelity in geometric regions of interest at points in time of interest, the geometric region has a stress field and a deformation rate and the geometric region has at least one of a rapid change in the stress field, a high stress field or a high deformation rate, producing a graphical display at a local workstation, and automatically presenting the most significant cross-sectional views on the graphical display, the automatic presentation of the most significant cross-sectional views comprising selecting regions which have at least one of a stress, a deformation rate or other variable above a threshold.